



What Is An Influenza Pandemic?

November 1, 2005



A pandemic is a global disease outbreak. An influenza pandemic occurs when a new influenza A virus emerges for which there is little or no immunity in the human population, begins to cause serious illness and then spreads easily person-to-person worldwide.

Historically, the 20th century saw 3 pandemics of influenza:

- 1918 influenza pandemic caused at least 500,000 U.S. deaths and up to 40 million deaths worldwide
- 1957 influenza pandemic caused at least 70,000 U.S. deaths and 1-2 million deaths worldwide
- 1968 influenza pandemic caused about 34,000 U.S. deaths and 700,000 deaths worldwide

Characteristics and challenges of a pandemic

(1) Rapid Worldwide Spread

- When a pandemic influenza virus emerges, its global spread is considered inevitable.
- Preparedness activities should assume that the entire world population would be susceptible.
- Countries might, through measures such as border closures and travel restrictions, delay arrival of the virus, but cannot stop it.

(2) Health Care Systems Overloaded

- Most people have little or no immunity to a pandemic virus. Infection and illness rates soar. A substantial percentage of the world's population will require some form of medical care.
- Nations unlikely to have the staff, facilities, equipment and hospital beds needed to cope with large numbers of people who suddenly fall ill.
- Inadequate supplies antivirals drugs, the two most important medical interventions for reducing illness and deaths, are of particular concern.
- Death rates are high, largely determined by four factors: the number of people who become infected, the virulence of the virus, the underlying characteristics and vulnerability of affected populations and the effectiveness of preventive measures.
- Past pandemics have spread globally in two and sometimes three waves.

(3) Medical Supplies Inadequate

- The need for vaccine is likely to outstrip supply.
- The need for antiviral drugs is also likely to be inadequate early in a pandemic.
- A pandemic can create a shortage of hospital beds, ventilators and other supplies. Surge capacity at non-traditional sites such as schools may be created to cope with demand
- Difficult decisions will need to be made regarding who gets antiviral drugs and vaccines.

(4) Economic and Social Disruption

- Travel bans, closings of schools and businesses and cancellations of events could have major impact on communities and citizens.
- Care for sick family members and fear of exposure can result in significant worker absenteeism.

Communications and Information are Critical Components of Pandemic Response

Education and outreach are critical to preparing for a pandemic. Understanding what a pandemic is, what needs to be done at all levels to prepare for pandemic influenza, and what could happen during a pandemic helps us make informed decisions both as individuals and as a nation. Should a pandemic occur the public must be able to depend on its government to provide scientifically sound public health information quickly, openly and dependably. For additional information on pandemic influenza visit: www.pandemicflu.gov



How Does Seasonal Flu Differ From Pandemic Flu?



November 1, 2005

Seasonal Flu

Outbreaks follow predictable seasonal patterns; occurs annually, usually in winter, in temperate climates

Usually some immunity built up from previous exposure

Healthy adults usually not at risk for serious complications (the very young, the elderly and those with certain underlying health conditions at increased risk for serious complications)

Health systems can usually meet public and patient needs

Vaccine developed based on known virus strains and available for annual flu season

Adequate supplies of antivirals are usually available

Average U.S. deaths approximately 36,000/yr

Symptoms: fever, cough, runny nose, muscle pain. Deaths often caused by complications, such as pneumonia.

Generally causes modest impact on society (e.g., some school closing, encouragement of people who are sick to stay home)

Manageable impact on domestic and world economy

Pandemic Flu

Occurs rarely (three times in 20th century - last in 1968)

No previous exposure; little or no pre-existing immunity

Healthy people may be at increased risk for serious complications

Health systems may be overwhelmed

Vaccine probably would not be available in the early stages of a pandemic

Effective antivirals may be in limited supply

Number of deaths could be quite high (e.g., U.S. 1918 death toll approximately 500,000)

Symptoms may be more severe and complications more frequent

May cause major impact on society (e.g., widespread restrictions on travel, closings of schools and businesses, cancellation of large public gatherings)

Potential for severe impact on domestic and world economy

For additional information visit: www.pandemicflu.gov



HHS Pandemic Influenza Plan

November 2, 2005



The *HHS Pandemic Influenza Plan* is a blueprint for pandemic influenza preparation and response. In particular, the *HHS Plan* provides guidance to national, state, and local policy makers and health departments. The goal is for all involved to achieve a state of readiness and quick response.

The *HHS Plan* is based on the knowledge that once a pandemic is triggered by the emergence of a novel influenza A virus subtype, it is a global event and all countries are at risk. The U.S. will work in concert with the World Health Organization and other international partners on containment and response activities abroad that also will assist the planning and monitoring for disease outbreaks in the U.S.

The *HHS Plan* includes an overview of the threat of pandemic influenza, a description of the relationship of this document to other Federal plans and an outline of key roles and responsibilities during a pandemic. In addition, the *HHS Plan* specifies needs and opportunities to build robust preparedness for and response to pandemic influenza. The preparations made for a pandemic today will have lasting benefits for the future.

Major components of the critical preparedness and ready response actions include:

- Intensifying surveillance and collaborating on containment measures – both international and domestic;
- Stockpiling of antivirals and vaccines and working with industry to expand capacity for production of these medical countermeasures;
- Creating a seamless network of Federal, state and local preparedness, including increasing health care surge capacity; and
- Developing the public education and communications efforts that will be so critical to keeping the public informed.

Strategies outlined in the *HHS plan* are based on an understanding of pandemics and influenza disease, and are guided by several overarching principles.

- Preparedness will require coordination among Federal, state and local government and partners in the private sector.
- An informed and responsive public is essential to minimizing the health effects of a pandemic and the resulting consequences to society.
- Domestic vaccine and production capacity sufficient to provide vaccine for the entire U. S. population is critical.
- Quantities of antiviral drugs sufficient to treat 25 percent of the U.S. population should be stockpiled.
- Sustained human-to-human transmission anywhere in the world will be the triggering event to initiate a pandemic response by the U.S.
- When possible and appropriate, basic public health measures will be employed to reduce person-to-person viral transmission and prevent or delay influenza outbreaks.
- At the start of a pandemic, vaccine, which will initially be in short supply, will be procured and distributed to state and local health departments for immunization of predetermined priority groups.
- At the onset of a pandemic, antiviral drugs from public stockpiles will be distributed to predetermined priority groups.

For a copy of the *HHS Pandemic Influenza Plan* visit: www.pandemicflu.gov.

The *Public Health Guidance for State and Local Partners* (Part 2 of the *HHS Plan*) provides 11 supplements on specific aspects of pandemic influenza planning and response..

Surveillance (Supplement 1) provides guidance on monitoring for influenza viruses and the health impact of influenza.

Laboratory Diagnostics (Supplement 2) provides guidance on the use of diagnostic tests to detect, characterize, and monitor novel subtypes of influenza, including avian influenza A (H5N1) and other viruses with pandemic potential. Occupational health issues for laboratory workers are also covered.

Healthcare Planning (Supplement 3) provides guidance for plans to include pandemic influenza surveillance, decision-making structures for responding to a pandemic, hospital communications, education and training, patient triage, clinical evaluation and admission, facility access, occupational health, distribution of vaccines and antiviral drugs, surge capacity, and mortuary issues. Planning for the provision of health care in non-hospital settings is also addressed.

Infection Control (Supplement 4) provides guidance on principles of infection control for limiting the spread of pandemic influenza including on the selection and use of personal protective equipment, hand hygiene and safe work practices, cleaning and disinfection of environmental surfaces, handling of laboratory specimens and post-mortem care. The guidance also covers infection control practices related to the management of infectious patients, the protection of persons at high-risk for severe influenza or its complications, and issues of occupational health.

Clinical Guidelines (Supplement 5) provides a guide related to clinical procedures for the initial screening, assessment, and management of patients as well as an assessment of locally available resources, such as rapid diagnostics, antiviral drugs and hospital beds.

Vaccine Distribution and Use (Supplement 6) provides guidance on the elements of a pandemic vaccination program, including planning for vaccine distribution, vaccination of priority groups, monitoring of adverse events, tracking of vaccine supply and administration, vaccine coverage and effectiveness studies, communications, legal preparedness, and training.

Antiviral Drug Distribution and Use (Supplement 7) provides guidance on the distribution and use of antiviral drugs for treatment and prophylaxis during an influenza pandemic. This section also covers the use of antiviral drugs in managing and containing infection with novel strains of influenza, including avian influenza A (H5N1) and human strains with pandemic potential.

Community Disease Control and Prevention (Supplement 8) provides guidance on the use of disease containment strategies to prevent or decrease transmission.

Managing Travel-Related Risks of Disease (Supplement 9) provides guidance on travel-related containment strategies that can be used during different phases of an influenza pandemic, ranging from distribution of health alert notices, to isolation and quarantine of new arrivals, to restriction or cancellation of nonessential travel.

Public Health Communications (Supplement 10) outlines key influenza pandemic risk communications concepts and addresses how CDC will provide timely and accurate information.

Workforce Support: Psychosocial Considerations and Information Needs (Supplement 11) focuses on psychosocial support services that will help workers manage emotional stress during an influenza pandemic and resolving related personal, professional, and family issues.

The *Public Health Guidance for State and Local Partners* is at: www.pandemicflu.gov.



1.1. Planning Assumptions

- 1.1.1. Susceptibility to the pandemic influenza virus will be universal.
- 1.1.2. Efficient and sustained person-to-person transmission signals an imminent pandemic.
- 1.1.3. The clinical disease attack rate will likely be 30% or higher in the overall population during the pandemic. Illness rates will be highest among school-aged children (about 40%) and decline with age. Among working adults, an average of 20% will become ill during a community outbreak.
 - 1.1.3.1. Some persons will become infected but not develop clinically significant symptoms. Asymptomatic or minimally symptomatic individuals can transmit infection and develop immunity to subsequent infection.
- 1.1.4. Of those who become ill with influenza, 50% will seek outpatient medical care.
 - 1.1.4.1. With the availability of effective antiviral drugs for treatment, this proportion may be higher in the next pandemic.
- 1.1.5. The number of hospitalizations and deaths will depend on the virulence of the pandemic virus. Estimates differ about 10-fold between more and less severe scenarios. Two scenarios are presented based on extrapolation of past pandemic experience (Table 1). Planning should include the more severe scenario.
 - 1.1.5.1. Risk groups for severe and fatal infection cannot be predicted with certainty but are likely to include infants, the elderly, pregnant women, and persons with chronic medical conditions.
- 1.1.6. Rates of absenteeism will depend on the severity of the pandemic.
 - 1.1.6.1. In a severe pandemic, absenteeism attributable to illness, the need to care for ill family members, and fear of infection may reach 40% during the peak weeks of a community outbreak, with lower rates of absenteeism during the weeks before and after the peak.
 - 1.1.6.2. Certain public health measures (closing schools, quarantining household contacts of infected individuals, “snow days”) are likely to increase rates of absenteeism.
- 1.1.7. The typical incubation period (interval between infection and onset of symptoms) for influenza is approximately 2 days.

- 1.1.8. Persons who become ill may shed virus and can transmit infection for up to one day before the onset of illness. Viral shedding and the risk of transmission will be greatest during the first 2 days of illness. Children usually shed the greatest amount of virus and therefore are likely to pose the greatest risk for transmission.
- 1.1.9. On average, infected persons will transmit infection to approximately two other people.
- 1.1.10. In an affected community, a pandemic outbreak will last about 6 to 8 weeks.
- 1.1.11. Multiple waves (periods during which community outbreaks occur across the country) of illness could occur with each wave lasting 2-3 months. Historically, the largest waves have occurred in the fall and winter, but the seasonality of a pandemic cannot be predicted with certainty.

Table 1. Number of Episodes of Illness, Healthcare Utilization, and Death Associated with Moderate and Severe Pandemic Influenza Scenarios*

Characteristic	Moderate (1958/68-like)	Severe (1918-like)
Illness	90 million (30%)	90 million (30%)
Outpatient medical care	45 million (50%)	45 million (50%)
Hospitalization	865,000	9,900,000
ICU care	128,750	1,485,000
Mechanical ventilation	64,875	745,500
Deaths	209,000	1,903,000

*Estimates based on extrapolation from past pandemics in the United States. Note that these estimates do not include the potential impact of interventions not available during the 20th century pandemics.



Smoking and Influenza

If you are thinking about quitting smoking – today is the time to take the appropriate steps to do so.

- Some research studies show an increase in influenza infections among smokers compared to nonsmokers.
- There is a higher mortality rate for smokers than nonsmokers from influenza

Additional respiratory health consequences:

- Smoking is related to chronic coughing and wheezing among adults and children and chronic bronchitis and emphysema among adults.
- Smokers are more likely than nonsmokers to have upper and lower respiratory tract infections, perhaps because smoking suppresses immune function.

Within 20 minutes after you smoke that last cigarette, your body begins a series of positive changes that continue for years.

Smoking Cessation:

- Smoking harms nearly every organ of the body, causing many diseases and reducing the health of smokers. Quitting smoking has immediate, as well as long-term health benefits.
- Individual, group, or telephone counseling by trained health professionals increases the chances of successful quitting. Nicotine replacement products and certain other medications also increase the chance that people can successfully quit.

To successfully quit smoking, you should take the following steps:

- See your doctor, call a telephone quitline, or join a group program to learn new skills and behaviors to deal with situations when you want to smoke.
- Get ready and set a quit date.
- Get support and encouragement from family and friends.
- Get medication and use it correctly.

For information on how you can quit smoking visit the following web sites and resources below:

- Online Guide to Quitting Smoking at <http://www.smokefree.gov/>
- Locate a Quitline in your State and Speak to Smoking Cessation Counselor at <http://www.smokefree.gov/usmap.html>
- Additional Information on How to Quit Smoking at <http://www.cdc.gov/tobacco/how2quit.htm>

For Telephone Assistance with Quitting, Call 1-877-44U-QUIT (1-877-448-7848)

For more information, visit www.cdc.gov/flu, or call CDC at 800-CDC-INFO (English and Spanish) or 888-232-6358 (TTY).



Department of Health and Human Services

Pandemic Planning

Update

A Report from Secretary Michael O. Leavitt
March 13, 2006



“President Bush asked Congress for \$7.1 billion to fund preparations, and in December 2005 Congress appropriated \$3.8 billion to help the Nation prepare. Of that, \$3.3 billion was allocated to HHS. This report outlines how that funding is being used to help achieve HHS’s five primary objectives.”

Message from the Secretary

"Let me be clear. It is only a matter of time before we discover H5N1 in America. The migration patterns of the wild fowl that carry the virus make its appearance here almost inevitable."

—Secretary Michael Leavitt,
HHS

We are in a race. We are in a race against a fast moving virulent virus with the potential to cause an influenza pandemic. In November when President Bush announced the National Strategy for Pandemic Influenza, the highly pathogenic H5N1 avian flu virus was confirmed in birds in 16 countries. It was known to have infected 122 people and 62 – half of those infected – died.

Today, four months later, H5N1 has spread to 37 nations on three continents; 175 people have been infected and 96 of them have died. To date, most of those people were exposed to infected poultry. Fortunately, there has been no sustained human-to-human transmission of the disease, but the rapid spread of H5N1 is reason for concern.

We are in a race, a race against a quick changing virus, for H5N1 has not only spread, it has evolved. There are now two main variants, or clades, of H5N1 and it is this second, newer clade that is spreading across western Asia into Europe, the Middle East and Africa. This second clade has killed over 60 percent of those it is known to have infected.

PandemicFlu.gov **AvianFlu.gov**

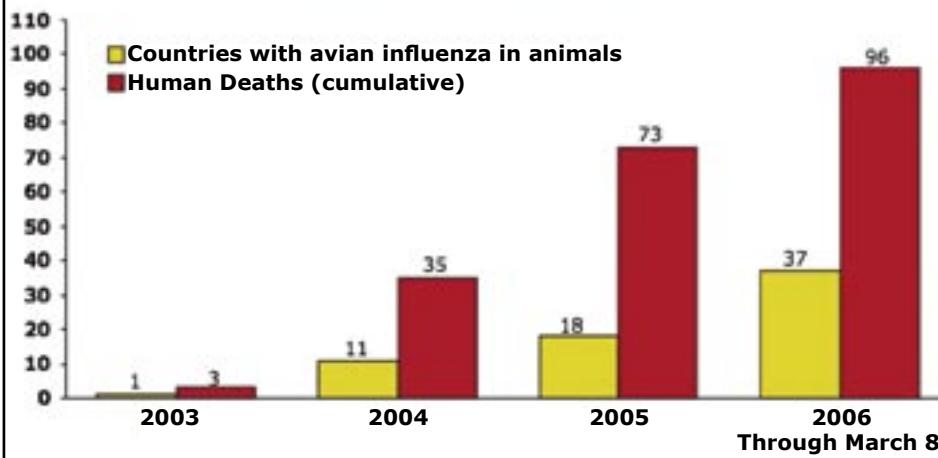
Flu Terms Defined

Seasonal (or Common) flu is a respiratory illness that can be transmitted person to person. Most people have some immunity, and a vaccine is available.

Avian (or bird) flu is caused by influenza viruses that occur naturally among wild birds. The H5N1 variant is deadly to domestic fowl and can be transmitted from birds to humans. There is no human immunity and no vaccine available.

Pandemic flu is virulent flu that causes a global outbreak, or pandemic, of serious illness. Because there is little immunity, the disease can be spread easily from person to person. Currently, there is no pandemic flu.

Countries with Avian Influenza and Cumulative Human Deaths



Let me be very clear. It is only a matter of time before we discover H5N1 in birds in America. The migration patterns of the wild fowl that carry the virus make its appearance here almost inevitable.

The arrival of the first H5N1 bird in America should not be cause for alarm or panic. It does not mean that a pandemic is at our doorstep. It should, however, motivate us to pick up the pace, to renew pandemic preparations on every front at every level.

Message from the Secretary (continued)

"We are better prepared today than we were yesterday. And we must be better prepared tomorrow than we are today."

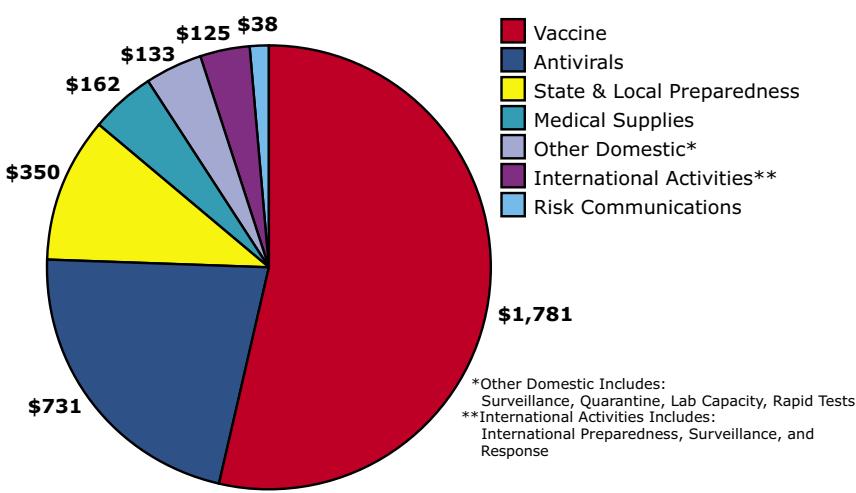
Our Five Priorities

President Bush asked Congress for \$7.1 billion to fund preparations, and in December 2005 Congress appropriated \$3.8 billion to help the Nation prepare. Of that, \$3.3 billion was allocated to HHS. This report outlines how that funding is being used to help achieve HHS's five primary objectives.

- Monitoring disease spread to support rapid response
- Developing vaccines and vaccine production capacity
- Stockpiling antivirals and other countermeasures
- Coordinating federal, state and local preparation
- Enhancing outreach and communications planning

We are in a race, a race against time and complacency. There is a role for everyone and we must count on everyone to fulfill their role.

**Pandemic Influenza Plan Funding
2006 Appropriations: HHS Allocation (\$3.3B)
(Dollars in Millions)**

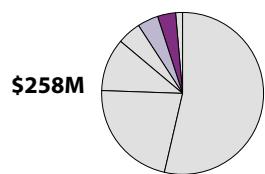


By definition a pandemic is defined as a global event. In reality, a pandemic is a local crisis worldwide. It can happen in every state and every city and every town at almost the same time.

A pandemic is not like a hurricane or an earthquake, where resources and help can be shifted from one area to another. Should it occur, every community will need to rely on its own planning and its own resources as it fights the outbreak.

Preparation is a continuum. Each day we prepare brings us closer to being ready. We are better prepared today

than we were yesterday. And we must be better prepared tomorrow than we are today.



Monitoring and Surveillance

*"For a couple of weeks,
it was raining dead
swans all over Europe."*

—Jan Slingenberg,
UNFAO

Our first line of defense is early detection. It is critical that we know immediately if the H5N1 influenza virus becomes capable of sustained human-to-human transmission. Early detection will give us the opportunity to respond, to attempt containment and to quickly gain the virus samples necessary for the development of a true pandemic vaccine.

Early detection is a race against time. Containing or slowing an influenza pandemic demands that a nascent outbreak anywhere in the world be recognized and confirmed within 1 to 2 weeks.

— International Collaboration and Monitoring

This is a big job. For HHS, it means putting experts on the ground in numerous nations spread across a vast landscape. It means working shoulder to shoulder with our federal colleagues.

Early detection requires international collaboration. It means working closely with the World Health Organization (WHO), the United Nations Food and Agriculture Organization, the World Organisation for Animal Health, the Institute Pasteur, and numerous national governments. Together, we are tracking the

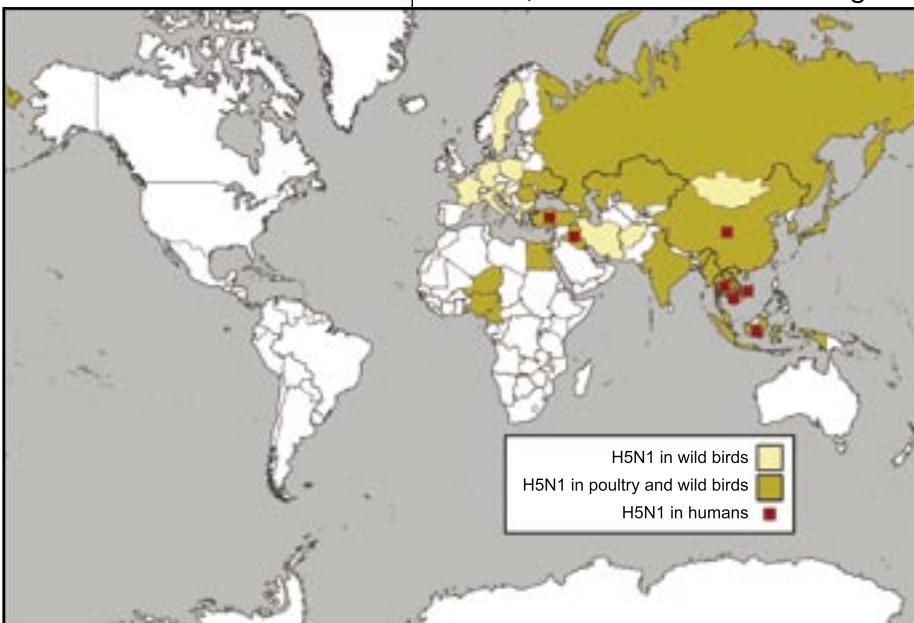
spread of the disease, conducting epidemiological studies of human infection, training local specialists and providing them with the tools for early and accurate detection.

CDC and USAID will soon enter into an agreement with the Wildlife Conservation Society to provide additional monitoring.

— Detection at Home

In February, the FDA approved a new laboratory test capable of diagnosing H5N1 influenza strains within four hours of receiving a sample. The new test cuts days from the time needed to confirm

human infection. FDA is also providing scientific and regulatory assistance to diagnostic manufacturers to speed the development and deployment of new detection products.

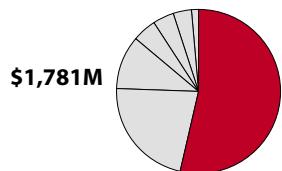


Monitoring and Surveillance (continued)

At the International Pledging Conference on Avian and Human Influenza in Beijing in January 2006, the US committed \$334 million in US grants and technical assistance to aid global effort.

As the avian infection moves closer to America, the Departments of Agriculture, Interior and Health and Human Services are stepping up the monitoring and testing of migratory birds. This surveillance is essential to provide early warning so the disease does not spread to people, poultry and pets and to insure the safety of the nation's food supply.

To monitor possible human infection, CDC is strengthening local laboratory capacity and capability, improving reporting systems and accelerating implementation of the national BioSense program, which collects real-time data from hospitals and other clinical-data sources.



Vaccines

The best defense against influenza is vaccination. It is also the most difficult defense to achieve. A fully effective vaccine cannot be developed until the virus strain it must protect against has evolved and been identified. And once developed, there must be the production capacity to manufacture enough vaccine to protect the population.



HHS, through its National Institute of Allergy and Infectious Diseases (NIAID), is addressing the problem in a number of ways. These include the development of pre-pandemic vaccines based on current lethal strains of H5N1 and collaboration with industry to increase the Nation's vaccine production capacity, as well as seeking ways to expand or extend the existing supply. We are also doing research in the development of new types of influenza vaccines.

- 2004 – H5N1 reference strain created by reverse genetics from H5N1 virus isolated from Vietnam
- April 2005 – RFP for cell-based vaccine contract issued
- Summer 2005 – Preliminary results from H5N1 vaccine clinical trials in healthy adults aged 18-64 indicate an immune response predictive of protection against the H5N1
- September 2005 – International Partnership on Avian and Pandemic Influenza launched
- October 2005 – Southeast Asia fact-finding mission led by HHS Secretary and State Department
- November 2005 – WHO Global Meeting
- November 2005 – Issuance of HHS Pandemic Influenza Plan



Vaccines (*continued*)

There is simply no way to predict which strain, if any, might produce a virus capable of mass human-to-human transmission – or which vaccine will be most effective against it.

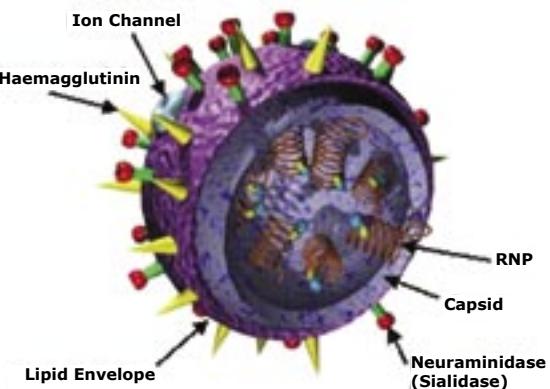
In early 2004, NIAID researchers applied a technology called reverse genetics to the H5N1 virus isolated from a patient in Vietnam to create an H5N1 reference vaccine strain. Working with industry, NIAID was able to create an inactivated H5N1 virus vaccine for clinical testing. In this testing, conducted in the summer of 2005, the vaccine induced an immune response predictive of protection against the H5N1 virus. We then contracted with two companies to manufacture nearly 8 million doses of this vaccine for strategic stockpiling.

— Vaccine for a Changing Virus

However, all influenza viruses evolve, or “drift” genetically over time. By 2005/2006 winter the H5N1 strain had drifted enough to result in a second distinct strain of H5N1. This strain, also lethal, is now circulating in Europe, Africa and parts of Asia. Its appearance dictates that we begin developing a second pre-pandemic vaccine.

The CDC has already taken the first step by producing the reference virus that will serve as a seed from which a second vaccine might be developed. It is

probable that H5N1 will continue to evolve, making it necessary to develop a series of vaccines. There is simply no way to predict which strain, if any, might produce a virus capable of mass human-to-human transmission – or which vaccine will be most effective against it. For this reason it is prudent to maintain stockpiles against each of the main circulating H5N1 strains.



In March, FDA released draft guidance for clinical data that are needed to show safety and effectiveness for new seasonal and pandemic influenza vaccines. The FDA also outlined an approach for an accelerated approval of these vaccines.

December 2005 – Passage of the Public Readiness and Emergency Preparedness Act (PREP Act)
December 2005 – Enrollment for clinical trials with H5N1 vaccine in healthy adults (>65 years of age) was completed
December 2005 –Tabletop public affairs exercises with US Departments and representatives from Canada and the UK in Switzerland, HHS led US delegation
December 2005 – WHO Global Pandemic Communications Meeting
December 2005 – First State Summit, Minnesota
December 2005 – Release of State and Local Pandemic Influenza Checklist
December 2005 – Convening of States Summit, in Washington, DC
December 2005 – Release of Business Pandemic Influenza Checklist

Vaccines (*continued*)

The CDC has already taken the first step by producing the reference virus that will serve as a seed from which a second vaccine might be developed.

Increasing Vaccine Capacity

The current U.S. capacity for manufacturing egg-based vaccines is not sufficient to supply our entire population. HHS is working with industry to determine ways to increase that capacity, including developing new facilities and expanding production in existing facilities. A request for formal proposals will be issued in April 2006.

The threat of liability has been a major obstacle to developing a strong domestic vaccine industry. HHS worked with the Department of Justice and Congress to address the problem. As a result, Congress adopted legislation (PREP Act) providing industry with limited liability when meeting a declared public health emergency.

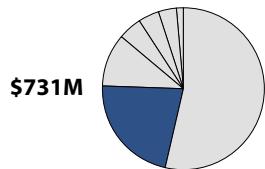
Current egg-based vaccine manufacturing methods are complex, difficult to expand rapidly to meet increased demand, and subject to failure if the vaccine strain does not grow efficiently in eggs. HHS is supporting research into cell-based vaccine manufacture, which holds the promise of a reliable, flexible, and easily scalable method of producing vaccine domestically. In April 2005, HHS announced a \$97 million contract for the development of cell-based flu vaccine, and we expect to award additional contracts for developing cell-based vaccines this spring.



There is also research into ways to increase the effectiveness of vaccines by exploring antigen-sparing technologies such as adjuvants, substances that increase either the efficacy or potency of a vaccine. If successful, they extend a given supply of vaccine to protect more people.

If a pandemic occurs prior to licensure of a vaccine, the FDA can use its Emergency Use Authorization authority to permit the use of unapproved products (or to permit unapproved uses for previously approved products) if there's a reasonable belief the products may be effective and if the benefits would outweigh risks.

- January 2006 – RFI issued on increasing egg-based vaccine capacity
- January 2006 – Bilateral teams sent to Turkey, Armenia, Azerbaijan, Georgia, Romania, Ukraine and Nigeria to assess avian flu outbreaks
- January 2006 – Tokyo WHO conference to draft WHO pandemic plan \$334M in US grants and technical assistance to aid global effort
- January 2006 – International Pledging Conference in Beijing; 6 State Summits AZ, VT, WV, RI, GA, KY
- January 2006 – Roughly 5 million courses in SNS stockpile
- January 2006 – RFI issued on advanced development of promising antivirals
- January 2006 – Release of Individuals and Families Pandemic Influenza Checklist
- January 2006 – First State Summit with signing of a Planning Agreement, Vermont



Antivirals

The immediate goal is to stockpile enough antivirals to treat 20 million people. The longer-term goal is to be able to treat 75 million people, or 25 percent of the U.S. population.

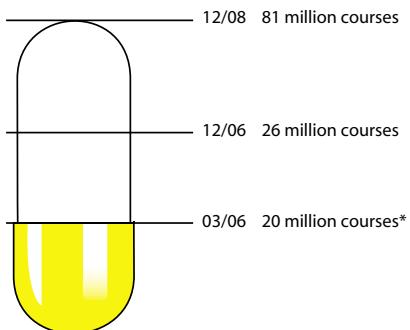
Antivirals are drugs that lessen the impacts of flu. There are currently two FDA-approved antivirals that have shown effectiveness against the H5N1 virus, Tamiflu, and Relenza. Both must be taken within 48 hours of the onset of flu symptoms. (Note that there are two other approved flu antivirals, but CDC studies show H5N1 to be resistant to them.)

We are building a national stockpile of these two antivirals. The immediate goal is to stockpile enough antivirals to treat 20 million people. The longer-term goal is to be able to treat 75 million people, or 25 percent of the U.S. population. Achieving this goal depends on future pandemic flu appropriations, manufacturing capacity and participation by the states.

— Antiviral Stockpiling

Because Tamiflu is also approved for prevention, treatment for an additional 6 million people is also being stockpiled. This will be used in an effort to help contain a first outbreak of potential-pandemic influenza. The concept is to blanket the area of the initial outbreak, giving Tamiflu to as many people as possible to prevent the flu's spread before it gets out of control.

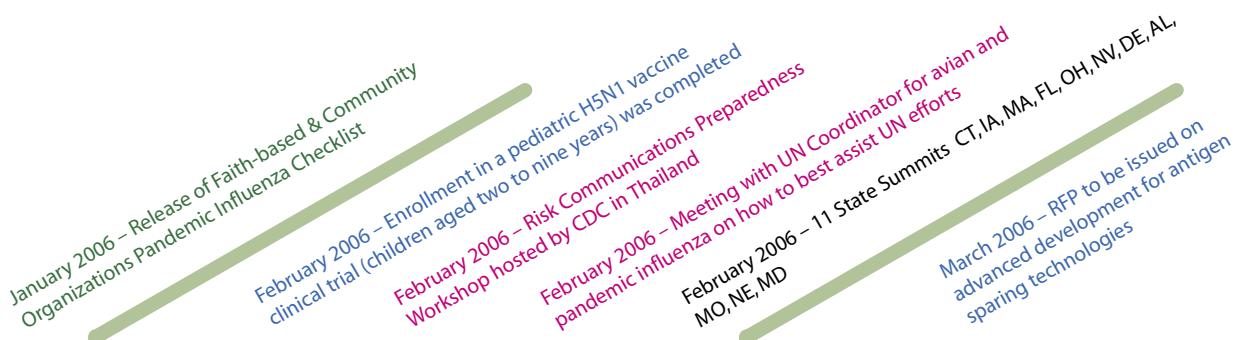
Antiviral Purchases



* a course is the number of doses needed to treat one person.

In March, HHS purchased more than 14 million courses of Tamiflu and Relenza, which will increase the national inventory to nearly 20 million courses. The total targeted stockpile is 81 million courses by the end of 2008. HHS will purchase 50 million out right and subsidize (by 25 percent) the states' purchase of 31 million courses. (A course is the number of doses needed to treat one person – ten capsules in the case of Tamiflu.) Antivirals will be distributed among the states and territories on a per-capita basis.

FDA is monitoring Tamiflu shipments to identify potential counterfeits, and is actively investigating companies selling fraudulent, unapproved influenza products.



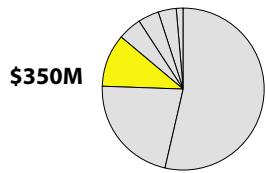
Antivirals (continued)

We are committing \$200 million to the development of additional antivirals.

New Antivirals Needed

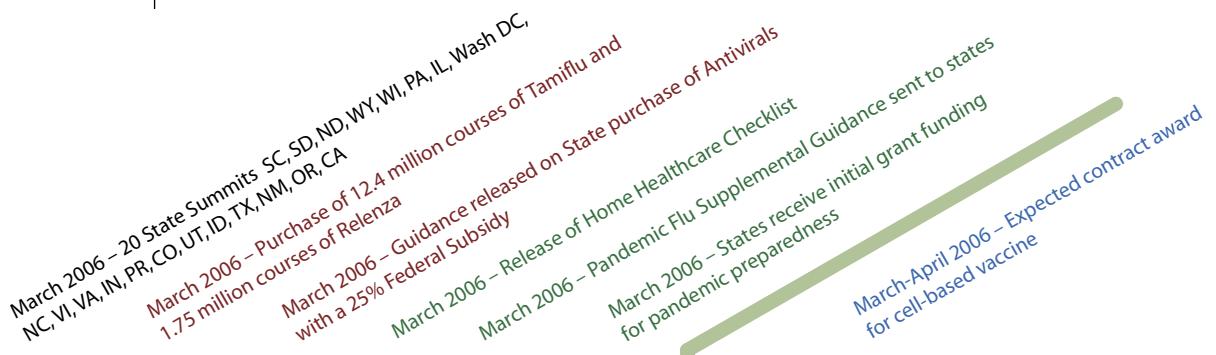
Influenza viruses can develop resistance to antivirals over time. New antivirals will be needed in the event H5N1 develops resistance to Tamiflu or Relenza. We are committing \$200 million to the development of additional antivirals. HHS expects to request formal proposals later this spring and to award contracts for the advanced development of promising antivirals by September 2006.

It is not enough to stockpile antivirals; there needs to be a plan to distribute them. HHS is discussing with the states whether the antivirals should be centrally located or warehoused locally. To receive funding, states are being required to develop distribution plans now, so that if a pandemic erupts, it will be clear where the drugs are to go and how they will get there. In addition to stockpiling antivirals, \$162 million will be used to procure essential medical supplies for a pandemic. Planned purchases this year include 6000 ventilators, 50 million surgical masks, 50 million N95 respirators, and face shields, gloves and gowns.



State and Local Preparedness

State and local preparedness is the foundation of pandemic readiness. The challenges that we will face in a pandemic will be vastly different from other response situations. An influenza pandemic is likely to occur almost simultaneously across countries and communities. It will demand that every aspect of our communities be self-sufficient, able to deal with the outbreak of illness should it hit. Political leaders, employers, school leaders, healthcare leaders, faith-based and community organizations, families and the media must all be informed, engaged, and actively involved.



State and Local Preparedness (*continued*)

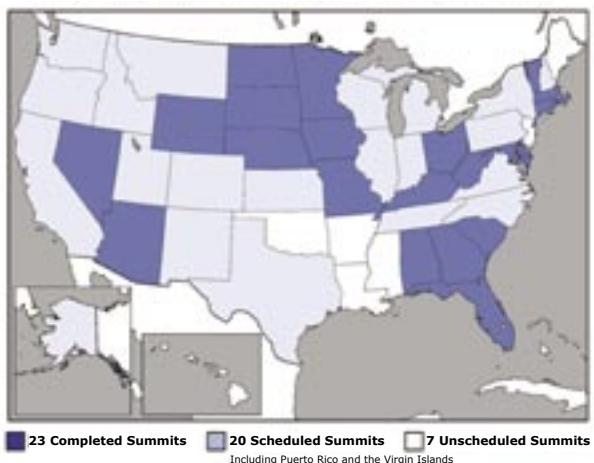
West Virginia is holding seven Regional Pandemic Flu Summits across their state to plan for the possibility of pandemic flu and specific WV preparedness needs – this is a direct outcome of HHS/WV summit held there in January.

To that end, President Bush directed and we convened a state and local preparedness process. We are working to help states, tribes, cities, schools, businesses, churches, and families throughout our nation plan for these unique challenges. We are collaborating with governors' offices in every state to hold pandemic planning summits and exercises. To date, we have completed 23 summits and planned an additional 20: we expect to visit the remaining states and territories this spring (see map). I am hearing from governors and local officials that the summits are helpful, and the process is working.

Congress allocated \$350 million this year to assist local and state preparedness. We are awarding \$100 million to states right now. The remaining \$250 million will be distributed later according to benchmarks we establish to measure progress.

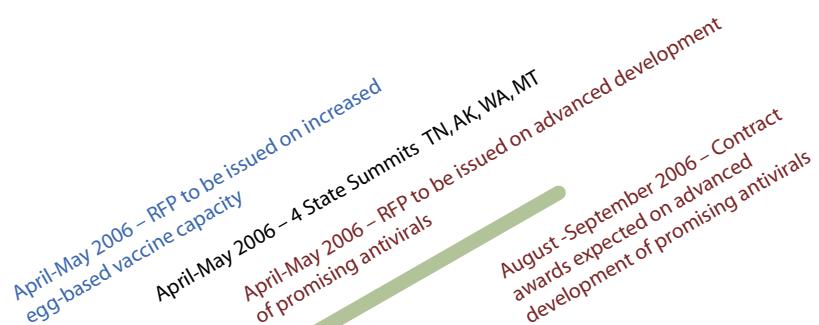
I am asking governors to make sure that their pandemic influenza plans are an integral element of and coordinate effectively with the National Response Plan and the National Incident Management System.

HHS Pandemic Planning - State Summit Overview



I am asking them to establish a Pandemic Preparedness Coordinating Committee that represents all relevant stakeholders in their jurisdiction. These collaborative committees will help states to articulate strategic priorities and oversee the development and execution of operational pandemic plans.

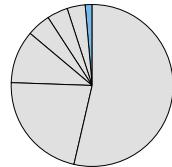
One of the most important elements of the preparedness response is practicing. We are assisting states in the development and administration of tabletop exercises to improve our Nation's readiness to respond and recover from a pandemic. We are asking states to exercise their plans by the end of 2006, and will invite them to participate in a nationwide pandemic planning exercise within the next twelve months. These planning and response exercises will help public health and law enforcement officials establish procedures and locations for quarantine, surge capacity, diagnostics, communication and many other pandemic-related needs.



Apr-May 2006

Aug-Sep 2006

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Communications

Today the media and web will be our primary pre-pandemic and pandemic communication sources.

Communications and outreach are essential to preparedness. I am committed to telling people what we know when we know it; to inform the public without raising unnecessary alarm, and to collaborate with our public and private partners in a way that is fully transparent. It is my hope that every state and local partner will practice that principle as well — every person must be a communicator.

We must all be ready to provide the best instructions and advice on what is happening, status of school, business and transportation impacts, home health care practices and basic infection control.

Congress foresaw the role and value of communications and funded our efforts to further develop comprehensive science-based risk communication strategies for pandemic influenza — communications that will touch every part of our nation with medical, social and economic implications and information on avian and pandemic influenza.

Checklists to aid in pandemic influenza preparations have been developed by CDC. These planning checklists provide specific guidance for state and local planning, businesses, health care providers, community organizations and individuals and families. Other checklists are being developed, along with toolkits that provide more specific guidance.

Available Checklists:

- State and Local
- Individuals and Families
- Business
- Schools (K-12)
- Faith-based and Community Organizations
- Medical Offices and Clinics
- Home Health Services



Upcoming Checklists:

- Emergency Medical Services
- Preschool
- Colleges and Universities
- Long Term Care
- Travel Industry
- Transportation

The global nature of pandemic preparedness and the enormity of potential impacts are fostering a spirit of collaboration across the world. Common efforts include surveillance of the disease, planning across national boundaries and economic sectors, and sharing research and technology. The U.S. and world organizations are conducting tabletop exercises and participating in international risk communications workshops and conferences at many levels.

Outreach Resources

During the 1918 influenza pandemic it was the newspapers and word of mouth that carried the news and information. Today the media and web will be our primary pre-pandemic and pandemic communication sources. Both must be used responsibly to inform and educate — to help achieve a nation prepared, but not in panic.

Communications (continued)

President Bush directed all federal agencies to establish a single, comprehensive web site to be the official federal source of pandemic and avian flu information. This web site, www.PandemicFlu.gov, hosts a vast array of information designed to meet diverse audience needs. It links to specialized information from federal agencies, states, international organizations and other important resources.

New broadcast capabilities will allow us to reach media outlets more quickly and ultimately provide information directly to the public via satellite. Convergence technologies will be used to integrate audio and video production on the web. Video, audio, multi-media and print materials are being developed for broad dissemination. Selected materials will be translated as appropriate.

PandemicFlu.gov **AvianFlu.gov**

Get Informed. Be Prepared.
One stop access to U.S. Government avian and pandemic flu information. Managed by the Department of Health and Human Services.

Federal Planning State & Local Planning Individual Planning Business Planning School Planning Health Care Planning Community Planning

Understanding Flu Terms
Seasonal flu, avian flu, and pandemic flu are not the same. [Flu terms defined](#)
View the [Seasonal vs. Pandemic comparison chart](#).

New Information & Activities

Wyoming State Summit
Mar. 28 — Meeting in Cheyenne, Governor Dave Freudenthal and HHS Secretary Leavitt lead Pandemic Flu Summit, inviting local, state, and private health officials. [More >>](#)

North Dakota State Summit
Mar. 9 — Governor John Hoeven and HHS Secretary Leavitt address public health officials, business and community leaders about pandemic flu preparedness. [More >>](#)

South Dakota State Summit
Mar. 9 — HHS Secretary Leavitt and Governor Mike Rounds lead Pandemic Flu Summit, inviting local, state, and private health officials. [Summit Agenda >>](#)

FDA Expedites Development of Flu Vaccines
Mar. 2 — The Food and Drug Administration issues guidance on developing and submitting clinical data for new seasonal and pandemic flu vaccines. [More >>](#)

NEWS ARCHIVE >>

Nations With Confirmed Cases
H5N1 Avian Influenza (March 6, 2006)



Click on map for larger image
Confirmed Human Cases by Country
(World Health Organization)

Avian Flu Watch

- Conformed Human Cases (World Health Organization)
- Map of Confirmed Cases
- Situation Updates (World Health Organization)
- Statement by HHS Secretary Leavitt Regarding Second Strain of the Influenza Virus

Resources

- Response Checklists
- Resource Tools
- Risk Communication
- National Strategic HHS Pandemic Plan

Meetings & Conferences

State Summits

- March 10 Cheyenne, WY
- March 15 Madison, WI
- March 17 Pittsburgh, PA
- March 17 Chicago, IL
- March 22 Washington, DC
- March 21 Raleigh, NC
- March 23 Virgin Islands
- March 23 Richmond, VA
- March 23 West Lafayette, IN
- March 24 San Juan, PR
- March 24 Denver, CO
- March 24 Utah

We are working to communicate to all the peoples of the world the essential information they need to plan, prepare and ultimately cope with pandemic flu and its impacts.



